

# Bat Research Efforts in the Upper Connecticut River Basin

Photos and story by Kristy King Wildlife Management Intern

Vermont's Endangered Species Committee recommended that little brown bats and northern long-eared bats be added to the state's endangered species list on Feb. 2. The decision was made based primarily on data collected by the United States Army Corps of Engineers (USACE) in the Upper Connecticut River Basin. Bat populations in the Northeast have been decimated due to the introduction of White-nose Syndrome.



Addition to the endangered species list provides some protection for these bats. State law makes it illegal to kill any individual within the species. Developers can be required to protect the habitat of an endangered species as a condition of their development permits.

White-nose Syndrome was discovered in New York in 2007. It is a cold-loving fungus that causes skin irritation in hibernating bats. Bats are roused by this irritation causing them to deplete their fat reserves. Bats have been seen foraging for food in the middle of winter causing them to freeze to death. Even if the individual bats survive the winter, their ability to reproduce could be impacted. It has been estimated that more than a million bats have died in the eastern United States. Some of the most important bat wintering sites in Vermont have seen mortality between 90 and 100 percent.

During the summer of 2010, USACE Biologist Gary Pelton led a team of seven wildlife interns in conducting bat mist net surveys on USACE land in Vermont. Approximately 75 percent of the data used in the decision making process was collected by Pelton and his crew.

Pelton has been netting in Vermont since 2003, but the state halted all bat surveys in 2008 to prevent stress to possibly infected bats. Netting was allowed in 2010 to gather data for the state.

To accurately show the impact of the disease, sites were chosen to compare data from previous years. Seventeen sites from 2003 to 2007 were selected to compare. The 2010 survey data showed an 82 percent decrease in the total number of bats caught. As the most abundant bat species in the eastern U.S., little brown bats were also the most common bat species netted in Vermont. A total of 196 little brown bats were captured at the comparison sites.

Only one little brown bat was captured in 2010 at a net site at Ball Mountain Lake located in Londonderry. This is a 99.995 percent decrease in the number of little brown bats caught on

USACE land in Vermont. Bats often have a bad reputation as an animal that carries rabies and drinks your blood while you sleep. The truth is bats are extremely beneficial to have around.

A big brown bat can eat up to 3,000 insects (depending on the size) in one night. With such a great loss to the bat population, there will certainly be greater impacts on the environment. White-nose syndrome could bring an end to the little brown bat population in the Northeast.